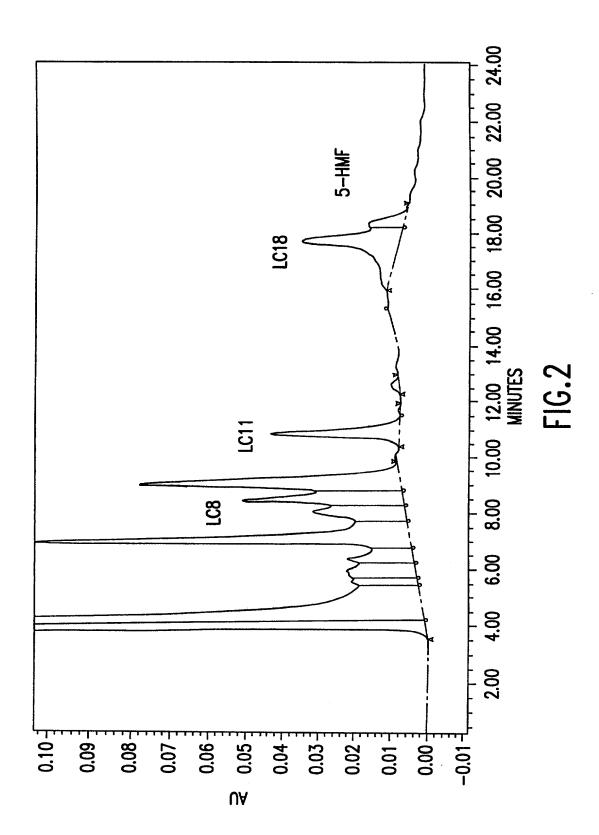
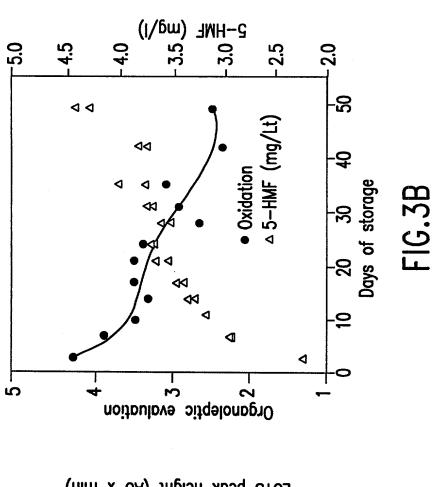
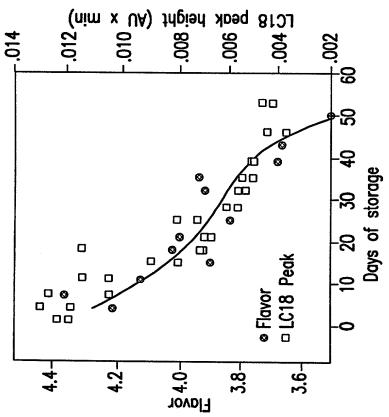


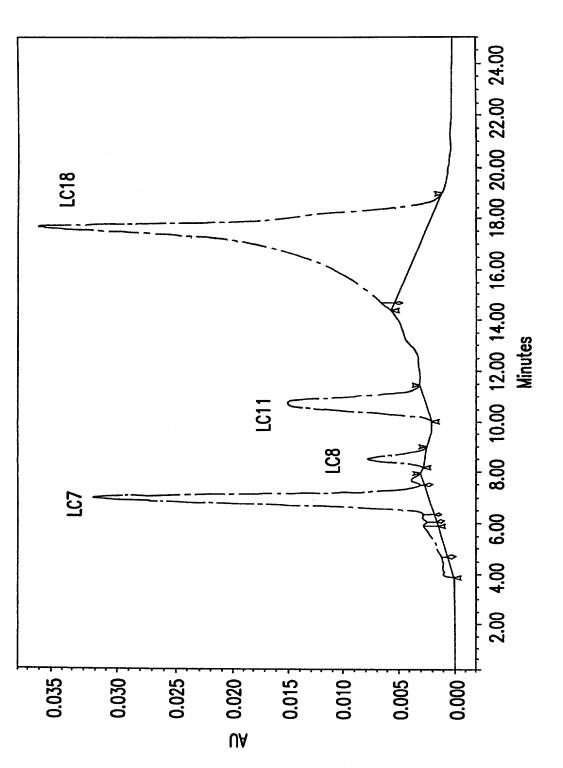
FIG. 1



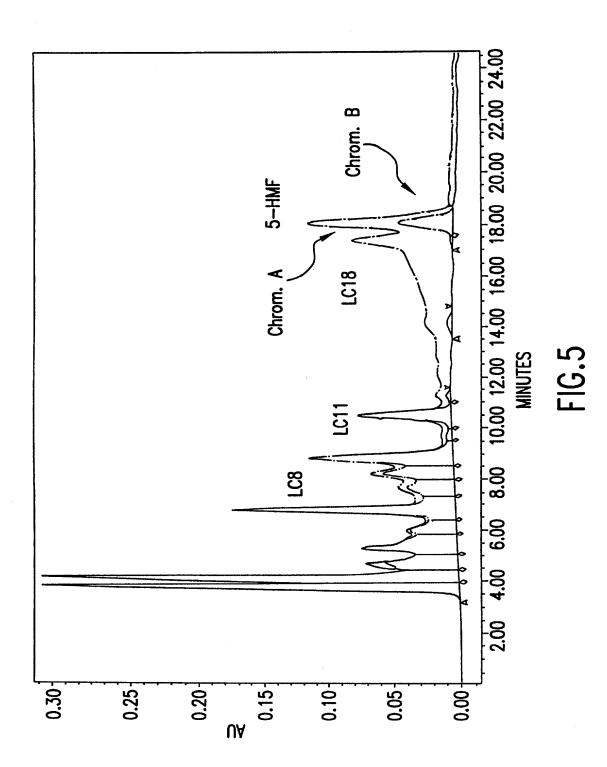




**FIG.3A** 



**FIG.4** 



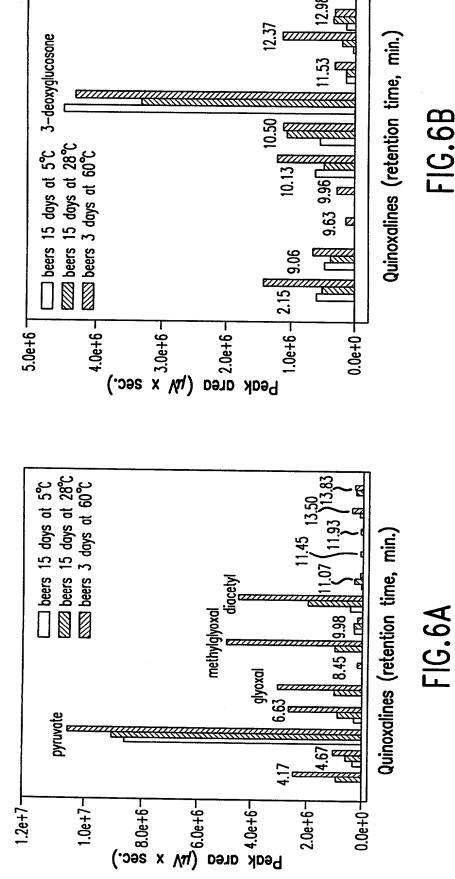
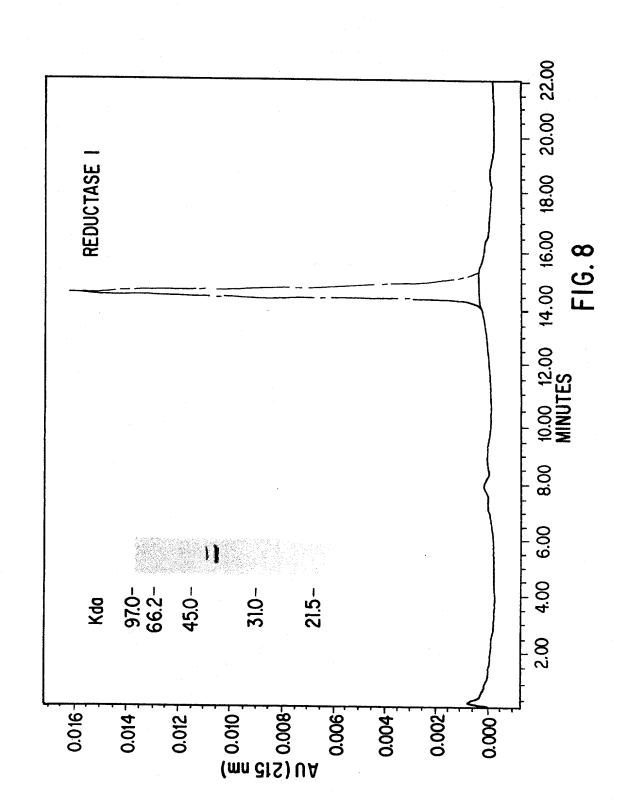
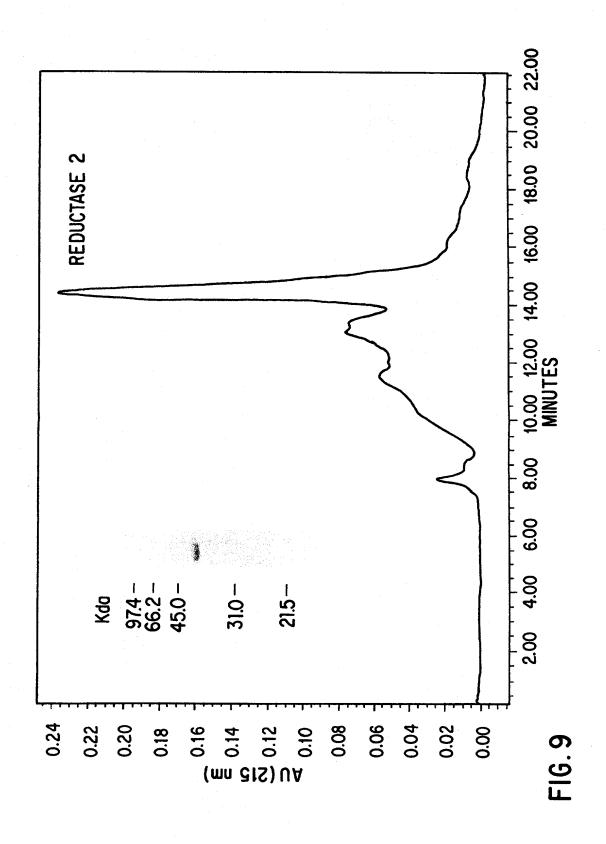


FIG.6B

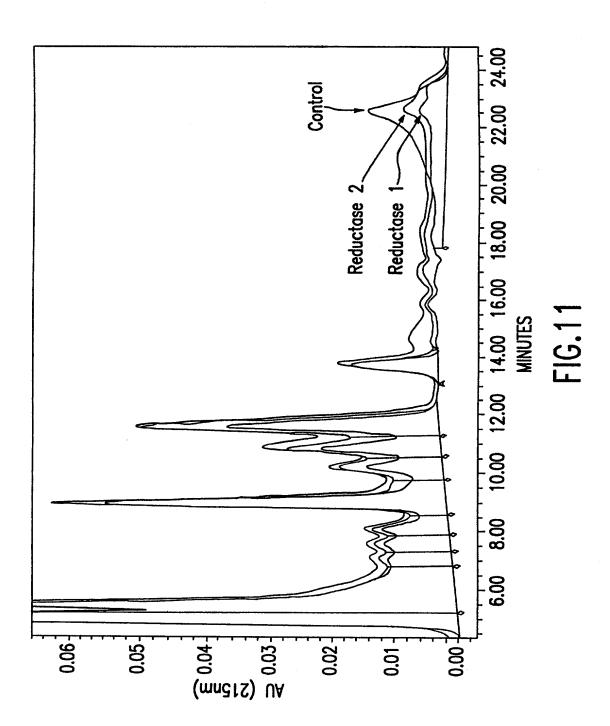
Wash and disruption of yeast cells Obtain cytosolic fraction DEAE Sepharose column chromatography equilibrated with Buffer A Pool DEAE 1 Pool DEAE 2 eluted with Buffer A eluted with 250mM KCl in Buffer A Ammonium Sulfate Ammonium Sulfate 50-90% saturation 80% saturation CM Sephadex CM Sephadex column chromatography column chromatography equilibrated with Buffer B equilibrated with Buffer B Pool CM 1 Pool CM 2 eluted with Buffer B eluted with Buffer B Wash and concentrate Wash and concentrate Cibacron Blue Cibacron Blue column chromatography column chromatography eqilibrated with Buffer C eqilibrated with Buffer C Pool Cibacron Blue 1 Pool Cibacron Blue 2 eluted with 400mM KCI in Buffer C eluted with 0-1M KCl in Buffer C Dialyze and concentrate Superose 12 column chromatography Red Sepharose equilibrated with Buffer C column chromatography equilibrated with Buffer C Pool Superose 12 Pool Red Sepharose Concentrate eluted with 500mM KCI in Buffer C Reverse—phase chromatography Desalt and concentrate (Resource RPC 1 ml) by ultrafiltration Reductase 2 Reverse—phase chromatography (Pro RPC column) Reductase 1 FIG.7

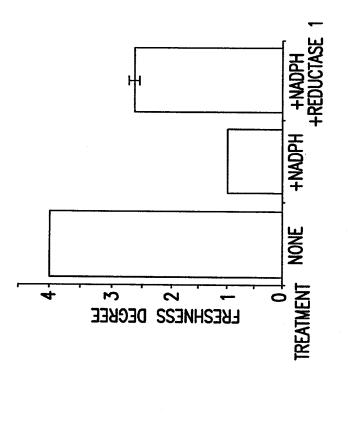




	Activity	Activity (nmol/min/ma)
Substrate	Reductase 1	Reductase 2
Pyridine-3-aldehyde	111.5	0.0
D-glucoronate	7.0	182.1
Acetaldehyde	585.8	41.9
Methylglyoxal	331.6	230.3
D-glucose	23.1	0.0
D-galactose	12.1	0.0
D-xylose	34.2	0.0
Metyrapone	329.6	383.0
2,3-butanodione	238.1	189.5
2,3-pentanodione	20.1	0.0
3-deoxyglucosone	190.9	115.1
Pyruvate	9.0	0.0

FIG.10





FRESHNESS DEGREE

FIG.12A

+NADPH +NADPH +REDUCTA

TREATMENT NONE

FIG.12B